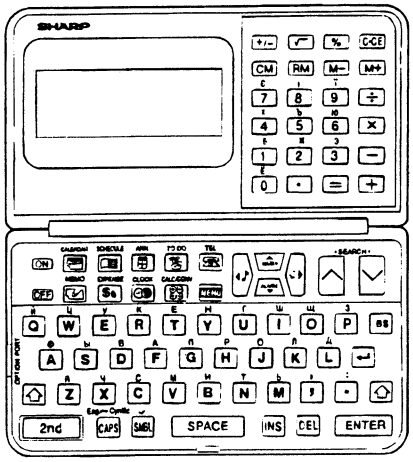
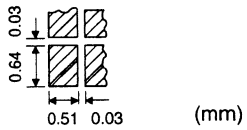
SHARP SERVICE MANUAL

CODE: 00ZZQM401BSPE



V14042

ZQ-M401B
ZQ-M402R
MODEL ZQ-M403T

	STANDARD FUNCTION	10 digits 1 M
DISPLAY SECTION	ELEMENT: FEM LCD	PARTS NAME: LF7841Q
	NUMERAL: 20 digits (4 lines)	
	 (mm)	119 x 32 dot matrix liquid crystal display 20 columns x 4 lines (with 6 x 8 dot characters)
	KEY SYSTEM: Rubber key	

LSI	CPU: LI351011 (ZQ-M401B) LI3510B0 (ZQ-M402R) LI3510C1 (ZQ-M403T) (253pin-FILM)	
	SRAM: M5M51008AFP-10LL (X1)	
POWER SUPPLY	AC: X	DC: ○
Main power supply: 6 VDC lithium batteries (CR2032 x 2) Memory backup power: 3 VDC lithium battery (CR2032 x 1)		
AC ADAPTOR		
RECHARGEABLE BATTERY		
POWER CONSUMPTION	0.01 W	
AUTO POWER OFF TIME	Approx. 7 minutes	
MEMORY PROTECT	Yes	
DIMENSIONS(mm)		
Open: 138(W) x 160.2(D) x 9.3(H) mm. Closed: 138(W) x 80(D) x 17.5(H) mm.		
Weight	Approx. 155g (including batteries)	
CALCULATIONS		
addition, subtraction, multiplication, division; constant, square root, percent, memory calculation, etc.		
Accessories		
Lithium batteries (CR2032 x 3) Operation manual		

Electronic notebook section

TEL mode	Entry and recall of names, phone numbers, and addresses
SCHEDULE mode	Entry and recall of dates, appointment times, and details of appointments Automatic day-forward function, schedule alarm function
ANNIVERSARY mode	Entry and recall of dates and details of anniversaries Anniversary notice function
CALENDAR mode	Display of calendars from January 1901 to December 2099 Schedule mark function distinguishing between morning and afternoon appointments Anniversary mark function
MEMO mode	Entry and recall of everyday memos
TO DO mode	Entry and recall of items, priority assignment
EXPENSE mode	Entry and recall of expense date, amount, payment type and description
Memory capacity	128 Kbytes (User area: Approx. 126 Kbytes) SCHEDULE mode capacity: Approx. 2120 entries TEL mode capacity: Approx. 3400 entries MEMO mode capacity: Approx. 950 entries • The approximate entry capacities above assume the following average entry sizes when all memory is used by a single mode. SCHEDULE Description 32 characters/entry TEL Name 16 characters/entry Number 12 characters/entry MEMO 128 characters/entry
Maximum character string length per entry	512 characters
Other features	Secret function, data transfer, index display

Clock

Crystal oscillation frequency	32,768 Hz
Clock precision	Average variance ±60 seconds per month (at 25°C/77°F)
Content of displays	year, month, day, day of week, hours, minutes, A.M./P.M.
Time system	12-hour and 24-hour clock

Operating time

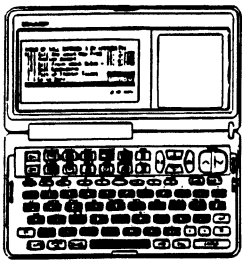
- Approx. 1200 hours
  When data is continuously displayed at an ambient temperature of 20°C (68°F).
- Approx. 800 hours
  When data is searched for 5 minutes per hour, and the data is displayed for 55 minutes per hour, at an ambient temperature of 20°C (68°F).
- When off, and the clock is running, operating time: Approx. 1.5 year
- Memory backup battery life:
  Approx. 5 years (if operating batteries are replaced promptly when exhausted)
  Approx. 3 years (if operating batteries are exhausted or not installed)

SHARP CORPORATION

This document has been published to be used for after sales service only.
The contents are subject to change without notice.

1. SYSTEM CONFIGURATION

IQ-8000 series
(Except for IQ-8900)
IQ-7000 series
ZQ-6000 series
ZQ-5000 series
ZQ-3000 series
ZQ-2000 series
ZQ-D400
ZQ-4450
ZQ-4450M

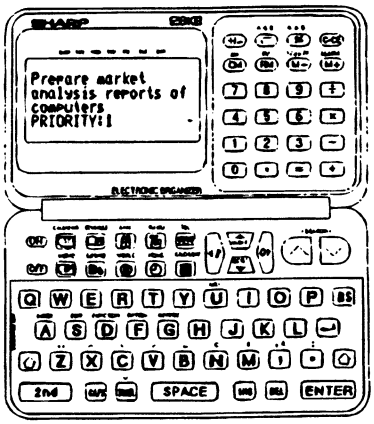


Connector cable
CE-300L/200L

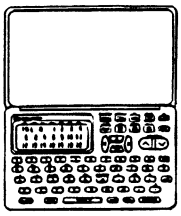
4pin

4pin

ZQ-M401B



ZQ-1000series
EL-6100/6170/6190
EL-6260



Connector cable
CE-220T

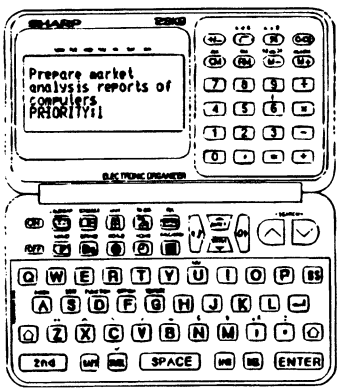
3pin

ORGANIZER LINK

Personal Computer

CE-390B (Version 1.2)

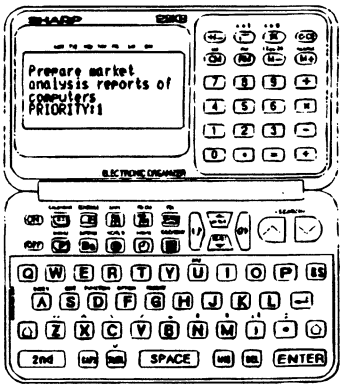
ZQ-M202R



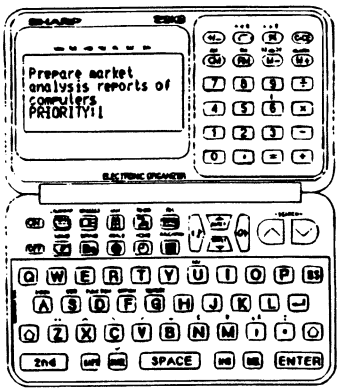
Connector cable
CE-300L/200L

4pin

ZQ-M402R



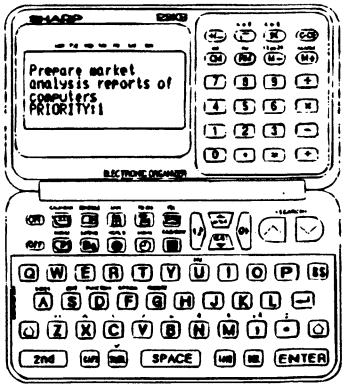
ZQ-M203T



Connector cable
CE-300L/200L

4pin

ZQ-M403T



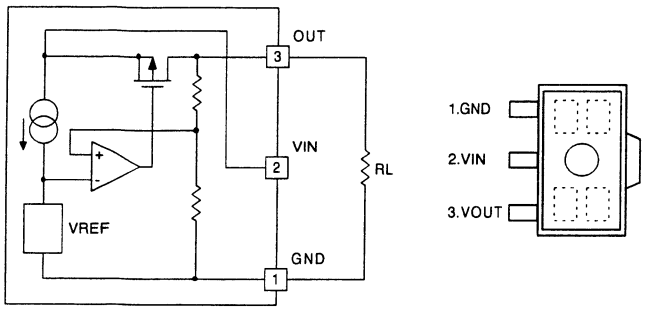
2. HARDWARE DESCRIPTION

1. CPU (LI351011 (ZQ-M401B) terminal description
CPU (LI3510B0 (ZQ-M402R) terminal description
CPU (LI3510C1 (ZQ-M403T) terminal description

Signal name	I/O	Terminal name	Signal name	I/O	Terminal name	Signal name	I/O	Terminal name	Signal name	I/O	Terminal name
TEST2	I	Test input	AD5	O	Address output	S20	O	Segment output	S80	O	Segment output
TEST1	I	Test input	AD4	O	Address output	S21	O	Segment output	S81	O	Segment output
STB0	O	Strobe output	AD3	O	Address output	S22	O	Segment output	S82	O	Segment output
STB1	O	Strobe output	AD2	O	Address output	S23	O	Segment output	S83	O	Segment output
STB2	O	Strobe output	AD1	O	Address output	S24	O	Segment output	S84	O	Segment output
STB3	O	Strobe output	EO1	O	Output port	S25	O	Segment output	S85	O	Segment output
STB4	O	Strobe output	BZ1	O	Buzzer output	S26	O	Segment output	S86	O	Segment output
STB5	O	Strobe output	EO2	O	Output port	S27	O	Segment output	S87	O	Segment output
STB6	O	Strobe output	KI8	I	Key input	S28	O	Segment output	S88	O	Segment output
STB7	O	Strobe output	KI7	I	Input port	S29	O	Segment output	S89	O	Segment output
STB8	O	Strobe output	GND		Power source	S30	O	Segment output	S90	O	Segment output
STB9	O	Strobe output	φOUT	O	Clock output	S31	O	Segment output	S91	O	Segment output
STB10	O	Strobe output	XO	O	Crystal oscillation output	S32	O	Segment output	S92	O	Segment output
STB11	O	Strobe output	XI	I	Crystal oscillation input	S33	O	Segment output	S93	O	Segment output
STB12	O	Strobe output	GND		Power source	S34	O	Segment output	S94	O	Segment output
STB13	O	Strobe output	VD		Crystal oscillation power source	S35	O	Segment output	S95	O	Segment output
STB14	O	Strobe output	VCC		Power source	S36	O	Segment output	S96	O	Segment output
STB15	O	Strobe output	VFF		LCD drive power source	S37	O	Segment output	S97	O	Segment output
RESET	I	Reset input	VHH		LCD drive power source	S38	O	Segment output	S98	O	Segment output
KI13	I	Key input	VR		LCD drive power source	S39	O	Segment output	S99	O	Segment output
KI12	I	Key input	VH		LCD drive power source	S40	O	Segment output	S100	O	Segment output
KI11	I	Key input	V1		LCD drive power source	S41	O	Segment output	S101	O	Segment output
KI10	I	Key input	V2		LCD drive power source	S42	O	Segment output	S102	O	Segment output
KI9	I	Key input	V3		LCD drive power source	S43	O	Segment output	S103	O	Segment output
KI6	I	Key input	V4		LCD drive power source	S44	O	Segment output	S104	O	Segment output
KI5	I	Key input	H16	O	Common output	S45	O	Segment output	S105	O	Segment output
KI4	I	Key input	H15	O	Common output	S46	O	Segment output	S106	O	Segment output
KI3	I	Key input	H14	O	Common output	S47	O	Segment output	S107	O	Segment output
KI2	I	Key input	H13	O	Common output	S48	O	Segment output	S108	O	Segment output
KI1	I	Key input	H12	O	Common output	S49	O	Segment output	S109	O	Segment output
DI08	I/O	Data I/O	H11	O	Common output	S50	O	Segment output	S110	O	Segment output
DI07	I/O	Data I/O	H10	O	Common output	S51	O	Segment output	S111	O	Segment output
DI06	I/O	Data I/O	H9	O	Common output	S52	O	Segment output	S112	O	Segment output
DI05	I/O	Data I/O	H8	O	Common output	S53	O	Segment output	S113	O	Segment output
DI04	I/O	Data I/O	H7	O	Common output	S54	O	Segment output	S114	O	Segment output
DI03	I/O	Data I/O	H6	O	Common output	S55	O	Segment output	S115	O	Segment output
DI02	I/O	Data I/O	H5	O	Common output	S56	O	Segment output	S116	O	Segment output
DI01	I/O	Data I/O	H4	O	Common output	S57	O	Segment output	S117	O	Segment output
CE3	O	Chip enable output	H3	O	Common output	S58	O	Segment output	S118	O	Segment output
CE2	O	Chip enable output	H2	O	Common output	S59	O	Segment output	S119	O	Segment output
CE1	O	Chip enable output	H1	O	Common output	S60	O	Segment output	S120	O	Segment output
R/W	O	Read/Write output	S1	O	Segment output	S61	O	Segment output	H33	O	Common output
BA08	O	Bank address output	S2	O	Segment output	S62	O	Segment output	H17	O	Common output
BA07	O	Bank address output	S3	O	Segment output	S63	O	Segment output	H18	O	Common output
BA06	O	Bank address output	S4	O	Segment output	S64	O	Segment output	H19	O	Common output
BA05	O	Bank address output	S5	O	Segment output	S65	O	Segment output	H20	O	Common output
BA04	O	Bank address output	S6	O	Segment output	S66	O	Segment output	H21	O	Common output
BA03	O	Bank address output	S7	O	Segment output	S67	O	Segment output	H22	O	Common output
BA02	O	Bank address output	S8	O	Segment output	S68	O	Segment output	H23	O	Common output
BA01	O	Bank address output	S9	O	Segment output	S69	O	Segment output	H24	O	Common output
AD15	O	Address output	S10	O	Segment output	S70	O	Segment output	H25	O	Common output
AD14	O	Address output	S11	O	Segment output	S71	O	Segment output	H26	O	Common output
AD13	O	Address output	S12	O	Segment output	S72	O	Segment output	H27	O	Common output
AD12	O	Address output	S13	O	Segment output	S73	O	Segment output	H28	O	Common output
AD11	O	Address output	S14	O	Segment output	S74	O	Segment output	H29	O	Common output
AD10	O	Address output	S15	O	Segment output	S75	O	Segment output	H30	O	Common output
AD9	O	Address output	S16	O	Segment output	S76	O	Segment output	H31	O	Common output
AD8	O	Address output	S17	O	Segment output	S77	O	Segment output	H32	O	Common output
AD7	O	Address output	S18	O	Segment output	S78	O	Segment output	S121	O	Segment output
AD6	O	Address output	S19	O	Segment output	S79	O	Segment output	S122	O	Segment output

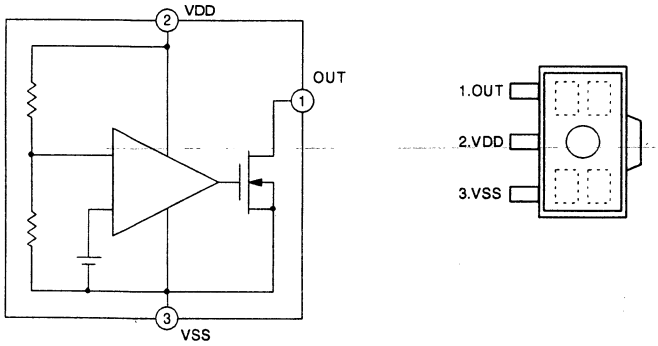
2. Regulator

(Internal block diagram)



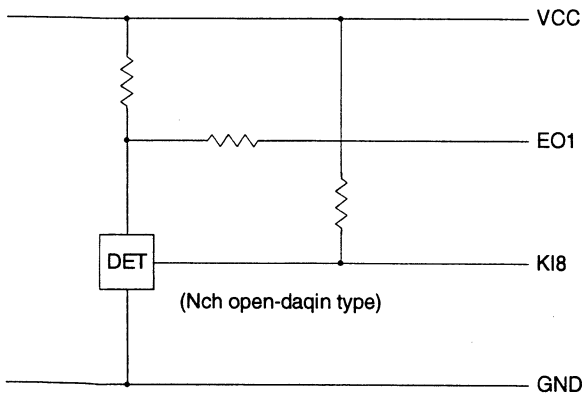
3. Detector

(Internal block diagram)



4. Low voltage detection method

- In this model, a warning is given only to the main battery exhaustion, not given to the backup battery exhaustion.
  The main battery exhaustion is detected in the circuit shown below:



1) Caution level (detection voltage: About 4.8 ~ 5.3V)

- When the caution level is detected while displaying, the low battery symbol (BATT) is lighted.
- When the caution level is detected on supplying the power to the set or on pressing the reset switch, the battery replacement indication (PLEASE REPLACE THE OPERATING BATTERY !) is displayed for about 4 sec.
- When the caution level is detected while sounding the alarm or key input sound, the alarm sound or key input sound is stopped.

2) Fatal level (Detection voltage: About 4.4 ~ 4.8V)

- When the fatal level is detected while displaying, the whole system is turned off.
- When the fatal level is detected, on supplying the power to the set or on pressing the reset switch, the whole system is turned off.
- When the fatal level is detected while sounding the alarm sound or key input sound, the alarm sound or key input sound is immediately stopped. After 100ms, the voltage is restored and the next process is performed.
- When the fatal level is detected while the power is off, pressing the ON key will not supply power to the set. The reset key is also disabled. (Until the battery is replaced.)

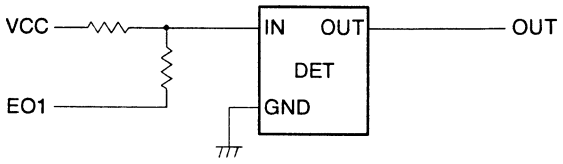
[Note] Since low voltage detection is not performed for the memory protection battery, please note the battery replacement label and replace when necessary.

5. Alphabet: Caps/Low

- Caps/Low of alphabet can be selected by pressing the CAPS key.
- When the power is supplied by pressing the ON key, Caps is selected. (Caps symbol is lighted.)

● Circuit

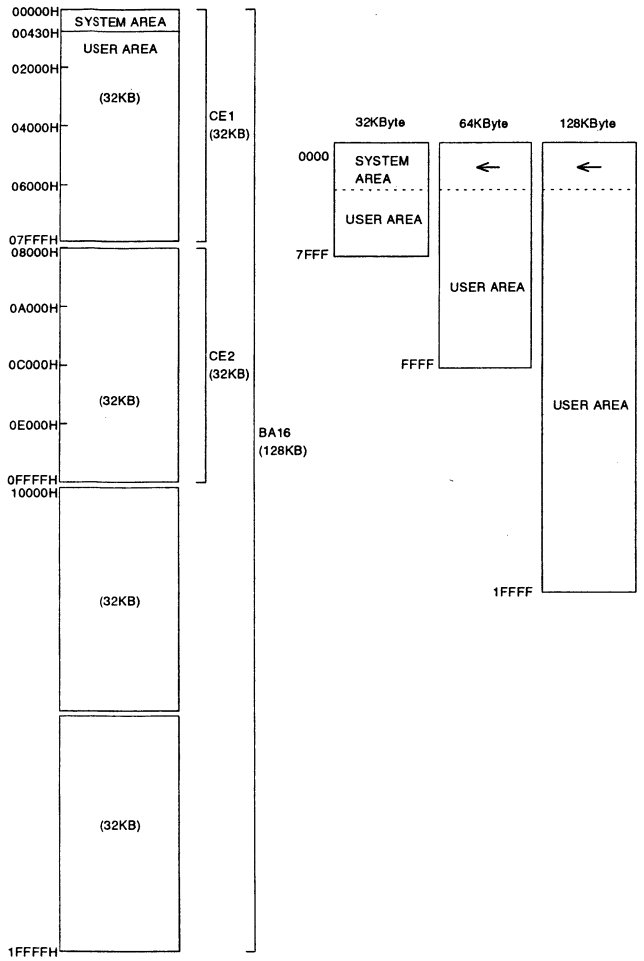
- This circuit has no hysteresis characteristics.



● Software

1. Caution level is detected every 0.5sec. (EO1 = GND)
2. In normal cases, only the fatal level is detected. (EO1 = Vcc)
3. Even when the system is off, the fatal level is detected.

6. Memory map



4. NOTE FOR SERVICING

1. Current check

(VCC = 6.0V)

1. Press the OFF key.
2. Measure the current value. (After 1 sec.)
   When OFF: 15μA or less
3. Press the ON key.
4. Measure the current value.
   When ON: 65μA or less

2. Note for Battery replacement

(1) Replacing batteries

Batteries used in the Organizer:

Type	Model	Qty.	Use
Lithium battery	CR2032	2	Unit operation
Lithium battery	CR2032	1	Memory backup

The standard built-in clock is powered by the operating batteries.

(2) Precautions when replacing the batteries.

Before replacing the battery, be sure to press [OFF] to turn the power off.
Do not replace the memory backup battery when the operating batteries are depleted. When the operating batteries become weak and you turn the power on, " BATT " will be displayed and the following display will appear temporarily:

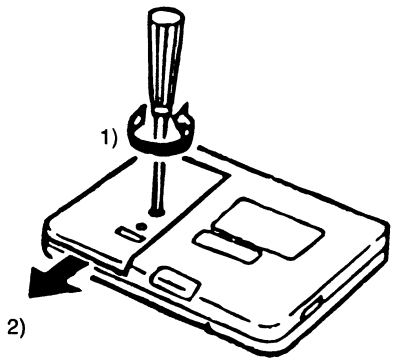
<CAUTION>

REPLACE THE OPERATING BATTERIES!

If the batteries become weaker (the alarm or the key beep does not sound), the power may go off during operation or the Organizer may fail to turn on.
The memory contents will still be retained by the memory backup battery.
Replace the operating batteries to avoid loss or alteration of data.
Before removing the batteries for replacement, record important information on paper.

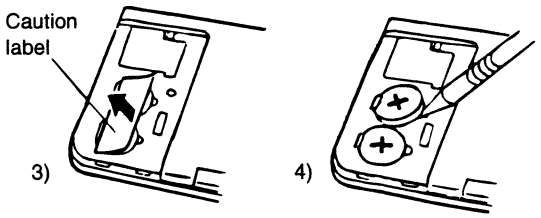
(3) Battery replacing procedure

■ Remove the battery cover.

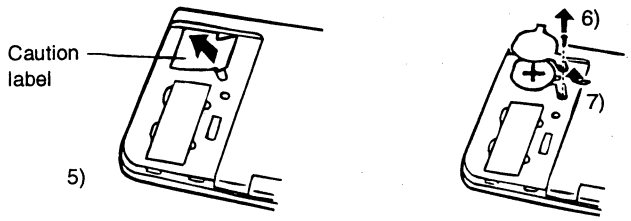


1) Loosen screw.
2) Remove battery cover.
   (Note) Screw is so constructed as not to be removed for prevention against missing.

■ Remove the battery.



3) Remove caution label.
4) Remove the battery. (MAIN side)



5) Remove caution label.

6) Remove the screw.

7) Remove battery protect, and remove the battery. (Backup side)

(Note) There is a screw beneath battery protect. When removing the keyboard lower cabinet, battery protect must be removed.

3. Using the data transfer function

<<ZQ-M401B>>

This Organizer can transfer data to and from the following models.

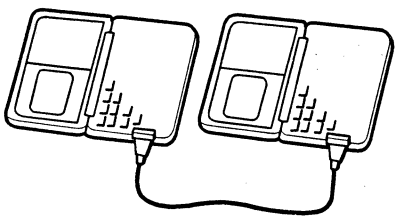
- Other ZQ-M401B Organizers using the optional CE-200L or CE-300L cable.
- The ZQ-D400/4450/4450M, IQ-8000/7000, ZQ-6000/5000/3000/2000 series Organizers using the optional CE-200L or CE-300L cable.
- The ZQ-1000, EL-6100 series and EL-6260 Organizers (including Auto Dialer) using the optional CE-220T cable.

Transferable data varies according to the model connected to the Organizer.

Model connected to the ZQ-M401B	Transferable data					
	SCHEDULE	TEL	MEMO	TO DO	ANNIVER-SARY	EXPENSE
IQ-8000 series IQ-7000 series ZQ-5000 series ZQ-2000 series	Yes	Yes	Yes	Yes (IQ-8500M, IQ-8400 models only)	—	—
ZQ-6000 series	Yes	Yes	Yes	Yes	—	—
ZQ-M401B ZQ-D400 ZQ-4450 ZQ-4450M ZQ-3000 series	Yes	Yes	Yes	Yes	Yes	Yes
ZQ-2650/ZQ-2850	Yes	Yes	Yes	—	Yes	Yes
ZQ-1000 series	Yes	Yes	Yes	—	—	Yes
EL-6100 series	Yes	Yes	—	—	—	—
EL-6260 series	—	Yes	—	—	—	—

There may be some data transfer restrictions between these models.

Before connecting the cable and transferring data between Organizers, turn off both units.



Notes:

- To interrupt data transfer, press [ON].
- It a connector is disconnected, or a similar problem occurs during data transfer, the message

  <For English version> "I/O DEVICE ERROR"
  <For French version> "ERREUR E/S"
  <For Spanish version> "ERROR DE DISPOSITIVO DE E/S"
  <For Dutch version> "I/O APPARAAT STORING"

  will appear. Press [C·CE] to clear the error.

- After data transfer, the data on the transmitter is preserved.
- There may be a voltage level difference between the connected Organizers which may cause the display contrasts to change. Should this occur, readjust the contrast as required.

(1) Transferring data between ZQ-M401B Organizers

Data in the SCHEDULE, ANNIVERSARY, TEL, MEMO, TO DO and EXPENSE modes can be transferred. The data is transferred and verified by mode (all entries in a mode or a directory – TEL 1, TEL 2, TEL 3) or by entry. In addition, data can be backed up.

① Transferring data by mode or by entry

During mode transfer, data previously stored in the specified mode of the receiver are deleted. Proceed with caution.

Note: When mode transfer is carried out in the TEL mode, all listings in the specified directory will be transferred. (In this case, the directory file name is transferred at the same time.)

1. Select the mode on the transmitter and receiver.
   - Press [SCHEDULE] [C·CE]. (Transmitter)
   - Press [SCHEDULE]. (Receiver)
2. Press [MENU], [∨] then 2

   <For English version> ("**OPTION**")
   <For French version> ("**OPTION**")
   <For Spanish version> ("**OPCIÓN**")
   <For Dutch version> ("**OPTIE**")

   the data transfer function on the receiver.
3. Press 2

   <For English version> ("**RECEIVE**")
   <For French version> ("**RÉCEPTION**")
   <For Spanish version> ("**RECIBIR**")
   <For Dutch version> ("**ONTVANGEN**")

   to set the unit in the receive mode.

<For English version>

<UNIT TO UNIT> **RECEIVING MODE**

<For French version>

<ORG. ⟷ ORG.> **MODE RECEPTION**

<For Spanish version>

<UNIDAD A UNIDAD> **MODO DE RECEPCIÓN**

<For Dutch version>

<UNIT NAAR UNIT> **ONTVANGSTFUNCTIE**

4. Press [MENU], [∨] then 2

   <For English version> ("**OPTION**")
   <For French version> ("**OPTION**")
   <For Spanish version> ("**OPCIÓN**")
   <For Dutch version> ("**OPTIE**")

   the data transfer function on the transmitter.

   Note: To transfer a single entry display the desired entry and press [MENU], [∨] 2.
5. Select 1

   <For English version> ("**SEND**")
   <For French version> ("**ÉMISSION**")
   <For Spanish version> ("**ENVIAR**")
   <For Dutch version> ("**ZENDEN**")

   to transfer data.

Notes:

- If the mode of the transmitter and the mode of the receiver are not the same, data transfer is not established. The message

  <For English version> **"DATA ERROR"**
  <For French version> **"ERREUR FICHIER"**
  <For Spanish version> **"ERROR DE DATOS"**
  <For Dutch version> **"DATA FOUT"**

  is displayed.
  When transferring TEL data, directories on the transmitter and receiver can be different. The contents received by the receiver will be stored in the open directory. For example, if TEL 1 is selected on the transmitter and TEL 3 on the receiver before the data transfer is established, the contents of TEL 1 will be sent to and stored in TEL 3.

- Turn off the SECRET function on both the transmitter and the receiver before mode transfer.

- If the amount of memory available on the receiver at the time of transfer is insufficient, data transfer is not possible. The message

  <For English version> **"MEMORY FULL"**
  <For French version> **"MÉMOIRE PLEINE"**
  <For Spanish version> **"MEMORIA LLENA"**
  <For Dutch version> **"GEHEUGEN VOL"**

  appears. Delete any unnecessary data, verify whether the available memory is sufficient, and repeat the data transfer procedure.

- If an error message appears while transferring data, press [C·CE] to clear the error.

② Transferring backup data

All the contents of the Organizer are transferred. During backup data transfer, data stored on the receiver are deleted. Proceed with caution. (Backup data transfer is only possible between identical products.)

1. To select the data transfer function on the receiver and set it in the receive mode for backup data transfer, press [MENU] [v] 2 [2nd] 2.

<For English version>

<UNIT TO UNIT>
BACK UP
RECEIVING
MODE

<For French version>

<ORG. ←→ ORG.>
COPIE DE SECOURS
MODE RECEPTION

<For Spanish version>

<UNIDAD A UNIDAD>
COPIA DE SEGURIDAD
MODO DE
RECEPCIÓN

<For Dutch version>

<UNIT NAAR UNIT>
BACKUP
ONTVANGSTFUNCTIE

2. To select the data transfer function on the transmitter and perform backup data transfer, press [MENU] [v] 2 [2nd] 1 Y.

③ Verifying data

It is possible to verify data by mode or by entry. If any discrepancies are found, the message

<For English version> **"VERIFY ERROR"**
<For French version> **"ERREUR VÉRIFICATION"**
<For Spanish version> **"ERROR DE VERIFICACIÓN"**
<For Dutch version> **"BEVESTIG FOUT"**

is displayed.
Verify data in the SCHEDULE mode.

1. Select the mode on the transmitter and the receiver.
   - Press [SCHEDULE] [C·CE] (Transmitter)
   - Press [SCHEDULE] (Receiver)
2. Set the receiver in the verify mode.
   Press [MENU], [v] then 2 to set the receiver in the verify mode.

<For English version>

<UNIT TO UNIT>
– VERIFYING –

<For French version>

<ORG. ←→ ORG.>
– JE VERIFIE –

<For Spanish version>

<UNIDAD A UNIDAD>
– VERIFICANDO –

<For Dutch version>

<UNIT NAAR UNIT>
– BEVESTIGEN –

3. Press [MENU], [v] then 2 to select the data transfer function on the transmitter.
4. Press 1 to perform verification.

(2) Transferring data with another ZQ series or IQ series Organizer

① Data transfer restrictions

There are some restrictions when transferring data with any ZQ series Organizer other than the ZQ-M401B or the IQ series Organizers (previously shown). These restrictions result from differences in functions and the maximum allowable size of an entry between the Organizers.

② When transferring SCHEDULE data from ZQ-D400/4450/4450M, IQ-8000/7000, ZQ-6000/5000 series Organizers.

- Any alarms set on SCHEDULE data transferred from the ZQ-D400/4450/4450M, IQ-8000/7000, ZQ-6000/5000 series Organizers, regardless of their precise setting time for specific event, will be set to the event's starting time on the ZQ-M401B.

③ When transferring data from ZQ-6000 or IQ-8000 series Organizers

- When transferring an entry from the ZQ-6000 or IQ-8000 series to the ZQ-M401B, the maximum allowable size of the transferred entry is as follows:

  TEL mode: 537 characters
  SCHEDULE mode: 523 characters
  MEMO mode: 544 characters
  TO DO mode: 530 characters

  If an entry exceeding these limits is sent to the ZQ-M401B,

  <For English version> **"I/O DEVICE ERROR"**
  <For French version> **"ERREUR E/S"**
  <For Spanish version> **"ERROR DE DISPOSITIVO DE E/S"**
  <For Dutch version> **"I/O APPARAAT STORING"**

  appears and the transfer will not be successful.
  The maximum number of characters that can be edited after an entry is transferred to the ZQ-M401B is 514 in the TEL mode and 512 in the SCHEDULE, MEMO and TO DO modes. Entries exceeding these limits can be displayed but cannot be edited. Those exceeding 515 characters can neither be displayed nor edited.

- Mode transfers from the ZQ-6000 series and IQ-8000 series can be performed even when the maximum length of an entry exceeds the character limits specified above. However, to display and edit data, the number of characters must be within these limits.

- TEL free field contents can be received and displayed on the ZQ-M401B, but are deleted once the edit mode is entered.

④ When transferring TO DO data from ZQ-6000 series, IQ-8000 Organizers

- When a TO DO entry is transferred from the ZQ-6000 series or IQ-8000 to the ZQ-M401B, the contents of the date and category fields are deleted and only the contents of the description and priority fields are received.

- When transferring TO DO data by mode from the ZQ-6000 series or IQ-8000 to the ZQ-M401B, entries are stored in the ZQ-M401B without date or category field contents. If the transferred data includes an entry with a date, the priority of all transferred entries will be a space. The contents of the priority field are received correctly only when none of the transferred entries contain a date.
- No data verification can be carried out.

⑤ When transferring data to and from ZQ-1000 series Organizers

- All characters transferred from the ZQ-M401B are displayed in capital letters on the ZQ-1000 series. Characters and symbols that cannot be displayed on the ZQ-1000 series appear as "■".
- EXPENSE data transferred between the ZQ-M401B and the ZQ-1000 series is stored on the receiving unit without payment type data.
- When transferring EXPENSE data by mode from the ZQ-1000 series to the ZQ-M401B, an

  <For English version> **"I/O DEVICE ERROR"**
  <For French version> **"ERREUR E/S"**
  <For Spanish version> **"ERROR DE DISPOSITIVO DE E/S"**
  <For Dutch version> **"I/O APPARAAT STORING"**

  may occur. This will occur when there is not enough memory space to be assigned as payment type data area, which EXPENSE data from the ZQ-1000 series does not have. If the error occurs, delete unnecessary data on the ZQ-M401B to increase free memory, then transfer the data again. Once an

  <For English version> **"I/O DEVICE ERROR"**
  <For French version> **"ERREUR E/S"**
  <For Spanish version> **"ERROR DE DISPOSITIVO DE E/S"**
  <For Dutch version> **"I/O APPARAAT STORING"**

  occurs, all EXPENSE data transferred to the ZQ-M401B before the error is cleared.
- When transferring EXPENSE data by mode from the ZQ-1000 series to the ZQ-M401B, no data verification can be carried out.

⑥ Transferring data by mode or by entry

To transfer an entry,

1. Recall the entry to be transferred on the transmitter.

   Note: To perform mode transfer, select the mode by pressing the mode key, and they press [C·CE]. It is not necessary to display an entry.

2. Select the data transfer function on the receiver, and set it in the receive mode by pressing [MENU], [∨] then 2.
3. Select the data transfer function on the transmitter and perform data transfer by pressing [MENU], [∨], 2 then 1.

Notes:

- Follow the same steps to transfer data from another ZQ or an IQ series Organizer.
- Notes described on page 4 also apply here.
- When transferring data to/from another ZQ series or an IQ series Organizer, the display contrast of the ZQ-M401B Organizer decrease when the units are connected.

⑦ Verification

Follow the steps explained in "Transferring data between ZQ-M401B Organizers" above.

(3) Transferring data with an EL series Organizer (including Auto Dialer)

For the EL-6100 series Organizer, TEL data and SCHEDULE data can be transferred. For the EL-6260 Auto Dialer, TEL data can be transferred.
Data is transferred by mode or by entry.

① Data transfer restrictions

When transferring data with an EL series Organizer (including the Auto Dialer), the following restrictions apply:

② When transferring data to an EL series Organizer

- Transferred data is added to previously stored data.
- Data is transferred in the same mode and directory.
- If a transferred entry exceeds the maximum number of characters that can be entered into the EL series Organizer as one entry, excess characters are deleted.
- Characters and symbols that cannot be displayed on the EL series Organizer are replaced by spaces. If all the columns that can be displayed are replaced by spaces, the corresponding entry is not stored.
- All letters are converted to capital letters on the EL series Organizer.
- If the SECRET function is turned on in the ZQ-M401B, only non-secret data can be transferred.

③ When transferring data from an EL series Organizer

- The received data are added to previously stored data.
- All non-English characters are converted to small letters.
- If the SECRET function is turned on in the EL series Organizer, only non-secret data can be transferred.

④ Transferring data to an EL series Organizer

Transfer all TEL 1 data in the Organizer to TEL 1 in the EL series Organizer.

1. Set the receiver in the receive mode.
2. Press [TEL] to select the TEL 1 directory on the transmitter.
3. Press [MENU], [∨] then 2 to select the data transfer function on the transmitter.

   Note: To transfer a single entry display the desired entry and press MENU [∨] 2.

4. Press 1 to perform data transfer.

- If the amount of memory available in the receiver at the time of data transfer is insufficient, an error message appears. Delete any unnecessary data, verify that there is sufficient memory available, and repeat the procedure.

⑤ Transferring data from an EL series Organizer

1. Select the mode on the receiver.
2. Select the data transfer function on the receiver, and set it in the receive mode.

3 Perform data transfer from the transmitter.

(4) Exchanging data with a personal computer

With Sharp's Organizer Link software and cable package, you can exchange data with a personal computer. The link is made via the 4-pin computer-link port on the left side of the Organizer using an interface cable to suit your computer. See the Organizer Link manual for connection and software operating details.

Note: Sharp's Organizer Link software may not be available at the time you purchase this Organizer. Check with your local Sharp dealer concerning availability.

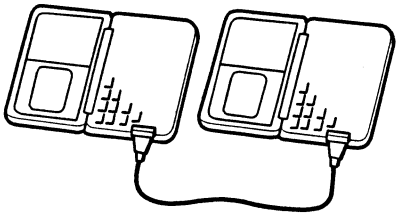
<<ZQ-M402R/M403T>>

The Organizer can transfer data to and from the following models.

- Other ZQ-M402R (M403T) Organizers using the optional CE-200L or CE-300L cable.
- The ZQ-M202R (M203T) Organizers using the optional CE-200L or CE-300L cable.

There may be some data transfer restrictions between these models.

Before connecting the cable and transferring data between Organizers, turn off both units.



Notes: To interrupt data transfer, press [ON].

- If a connector is disconnected, or a similar problem occurs during data transfer, the message

  <For English version> **"I/O DEVICE ERROR"**
  <For Russian version> **"СБОЙ УСТР-ВА ВВОДА/ВЫВОДА"**
  <For Ukrainian version> **"ЗБІЙ ПРИСТРОЮ ВВОДУ/ВИВОДУ"**
  <For Polish version> **"BŁAD MECHANIZMU WEJ./WYJ."**
  <For Hungarian version> **"B/K ESZKÖZ HIBA"**
  <For Czech version> **"PORUCHA I/O ZAŘÍZENÍ"**

  will appear. Press [C·CE] to clear the error.

- After data transfer, the data on the transmitter is unchanged.

Transferring data between ZQ-M402R (M403T) Organizers

Data in the SCHEDULE, ANN, TEL, MEMO EXPENSE and TO DO modes can be transferred. The data is transferred and verified by mode (all entries in a mode or a directory – TEL 1, TEL 2, TEL 3) or by entry. In addition, data can be backed up.

Transferring data by mode or by entry

During mode transfer, data previously stored in the specified mode of the receiver is deleted. Proceed with caution.

Note: When mode transfer is carried out in the TEL mode, all listings in the specified directory will be transferred. (In this case, the directory file name is transferred at the same time.)

1. Select the mode on the transmitter and receiver.
   - Press [SCHEDULE] [C·CE]. (Transmitter)
   - Press [SCHEDULE]. (Receiver)
2. Press [MENU], [v] then 2

   <For English version> **("OPTION")**
   <For Russian version> **("ОБМЕН ДАННЫМИ")**
   <For Ukrainian version> **("ОБМІН ДАНИМИ")**
   <For Polish version> **("OPCJA")**
   <For Hungarian version> **("OPCIÓ")**
   <For Czech version> **("DOPLŇK. FUNKCE")**

   the data transfer function on the receiver.
3. Press 2

   <For English version> **("RECEIVE")**
   <For Russian version> **("ПОЛУЧИТЬ")**
   <For Ukrainian version> **("ПРИЙОМ")**
   <For Polish version> **("ODBIERAĆ")**
   <For Hungarian version> **("VÉTEL")**
   <For Czech version> **("PŘÍJEM")**

   to set the unit in the receive mode.

<For English version>

<UNIT TO UNIT>
RECEIVING MODE

<For Russian version>

<ОБМЕН ДАННЫМИ>
РЕЖИМ ПРИЁМА

<For Ukrainia version>

<ОБМІН ДАНИМИ>
РЕЖИМ ПРИЙОМУ

<For Polish version>

<TRANSFER DANYCH>
TRYB ODBIORU

<For Hungarian version>

<EGYSÉGRŐL EGYSÉGRE>
VÉTELI MÓD

<For Czech version>

<PŘÍSTROJ – PŘÍSTROJ>
REŽIM PŘÍJMU

4. Press [MENU], [v] then 2

   <For English version> **("OPTION")**
   <For Russian version> **("ОБМЕН ДАННЫМИ")**
   <For Ukrainian version> **("ОБМІН ДАНИМИ")**
   <For Polish version> **("OPCJA")**
   <For Hungarian version> **("OPCIÓ")**
   <For Czech version> **("DOPLŇK. FUNKCE")**

   the data transfer function on the transmitter.

Note: To transfer a single entry display the desired entry and press [MENU] [v] 2.

5. Press 1

   <For English version> **("SEND")**
   <For Russian version> **("ПЕРЕДАТЬ")**
   <For Ukrainian version> **("ПЕРЕДАЧА")**
   <For Polish version> **("WYSYŁAĆ")**
   <For Hungarian version> **("ADÁS")**
   <For Czech version> **("VYSLÁNÍ")**

   to transfer data.

Notes:

- If the mode of the transmitter and the mode of the receiver are not the same, data transfer is not established. The message

  <For English version> **"DATA ERROR"**
  <For Russian version> **"ОШИБКА В ДАННЫХ"**
  <For Ukrainian version> **"ПОМИЛКА У ДАНИХ"**
  <For Polish version> **"BŁĄD DANYCH"**
  <For Hungarian version> **"ADATHIBA"**
  <For Czech version> **"CHYBA DAT"**

  is displayed.
  When transferring TEL data, directories on the transmitter and receiver can be different. The contents received by the receiver will be stored in the open directory. For example, if TEL 1 is selected on the transmitter and TEL 3 on the receiver before the data transfer is established, the contents of TEL 1 will be sent to and stored in TEL 3.

- Turn off the SECRET function on both the transmitter and the receiver before mode transfer.

- If the amount of memory available on the receiver at the time of transfer is insufficient, data transfer is not possible.
  The message

  <For English version> **"MEMORY FULL"**
  <For Russian version> **"ПЕРЕПОЛНЕНИЕ ПАМЯТИ"**
  <For Ukrainian version> **"ПАМ'ЯТЬ ЗАПОВНЕНА"**
  <For Polish version> **"PAMIĘĆ PEŁNA"**
  <For Hungarian version> **"MEMÓRIA MEGTELT"**
  <For Czech version> **"PAMĚŤ PLNÁ"**

  appears. Delete any unnecessary data, verify whether the available memory is sufficient, and repeat the data transfer procedure.

- If an error message appears while transferring data, press [C·CE] to celear the error.

Transferring backup data

All the contents of the Organizer are transferred. During backup data transfer, data stored on the receiver is deleted. Proceed with caution. (Backup data transfer is only possible between identical models.)

1. To select the data transfer function on the receiver and set it in the receive mode for backup data transfer,

   Press [MENU] [v] 2 [2nd] 2.

<For English version>

<UNIT TO UNIT>
BACKUP
RECEIVING
MODE

<For Russian version>

<ОБМЕН ДАННЫМИ>
ДУБЛИРОВАНИЕ
РЕЖИМ
ПРИЁМА

<For Ukrainia version>

<ОБМІН ДАНИМИ>
РЕЭЕРВУВАННЯ
РЕЖИМ
ПРИЙОМУ

<For Polish version>

<TRANSFER DANYCH>
ZROBIĆ KOPIĘ
TRYB
ODBIORU

<For Hungarian version>

<EGYSÉGRÖL EGYSÉGRE>
BACKUP
VÉTELI
MÓD

<For Czech version>

<PŘÍSTROJ – PŘÍSTROJ>
REZERVNÍ KOPIE
REŽIM
PŘÍJMU

2. To select the data transfer function on the transmitter and perform backup data transfer,

   Press [MENU] [v] 2 [2nd] 1 Y.

Verifying data

It is possible to verify data by mode by mode or entry. If any discrepancies are found, the message

<For English Version> **"VERIFY ERROR"**
<For Russian Version> **"ОШИБКА ПРИ ПРОВЕРКЕ"**
<For Ukrainian Version> **"ПОМИЛКА ПРИ ПЕРЕВІРЦІ"**
<For Polish Version> **"BŁĄD PODCZAS SPRAWDZANIA"**
<For Hungarian Version> **"ELLENÖRZÉS HIBA"**
<For Czech Version> **"CHYBA PŘI POTVRZENÍ"**

is displayed.
To verify data in the SCHEDULE mode,

1. Select the mode on the transmitter and the receiver.
   - Press [SCHEDULE] then [C·CE]. (Transmitter)
   - Press [SCHEDULE]. (Receiver)
2. Press [MENU], [v] 2 then 3 to set the receiver in the verify mode.

<For English version>

<UNIT TO UNIT>
– VERIFYING –

<For Russian version>

<ОБМЕН ДАННЫМИ>
– ПРОВЕРКА –

<For Ukrainia version>

<ОБМІН ДАНИМИ>
– ПЕРЕВІРКА –

<For Polish version>

<TRANSFER DANYCH>
– SPRAWDZANIE –

<For Hungarian version>

<EGYSÉGRŐL EGYSÉGRE>
– ELLENÖRZÉS ALATT –

<For Czech version>

<PŘÍSTROJ – PŘÍSTROJ>
– POTVRZUJI –

3. Press [MENU], [v] then 2 to select the data transfer function on the transmitter.
4. Press 1 to perform verification.

Transferring data with ZQ-M202R (M203T) Organizer

Data transfer restrictions

There are some restrictions when transferring data with ZQ-M202R (M203T) Organizer. These restrictions result from differences in functions and the maximum allowable size of an entry between the Organizers.

When transferring SCHEDULE data from the ZQ-M202R (M203T) Organizer

- Any alarms set on SCHEDULE data transferred from one of the above Organizers, regardless of their actual setting time for the specified events, will be set to the event's starting time on the ZQ-M402R (M403T).

Transferring data by mode or by entry

To transfer an entry,

1. Recall the entry to be transferred on the transmitter.

   Note: To perform mode transfer, select the mode by pressing the mode key, and then press [C·CE]. It is not necessary to display an entry.

2. Select the data transfer function on the receiver, and set it in the receive mode by pressing [MENU], [v] then 2.
3. Select the data transfer function on the transmitter and perform data transfer by pressing [MENU], [v], 2 then 1.

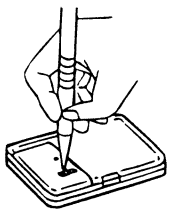
Verification

Follow the steps explained in "Transferring data between ZQ-M402R (M403T) Organizers" above.

4. Reset procedure

(1) When trouble occurs

An impact or a strong external electrical field may leave none of the keys operational. Press the RESET switch on the back of the Organizer.



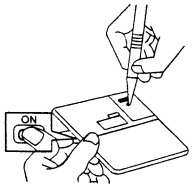
The impact or external electrical field may erase some or all of the Organizer's memory.
Press the RESET switch with the tip of a ball-point pen or similar object, but not anything breakable (like a pencil point or a needle).

(2) All RESET operation

If a problem occurs after replacing the batteries, or if the Organizer does not function properly even after the above RESET operation, perform the following:

1. While holding [ON], press the RESET switch on the back. Release the RESET switch and then release [ON].

   The following display will appear.



CLEAR ALL DATA
OK (Y/N) ?

2. Press [N].
   Returns to the initial display.

Caution: Do not press [Y] in step 2. Pressing [Y] will delete all data stored in the Organizer and reset the built-in clock.

5. Contrast adjustment

Adjust the display contrast to make the display easier to read.

1. Press [MENU] twice.

```
*MENU*
1 FUNCTION
2 OPTION
```

2. Select " [1] FUNCTION".
   [1]
3. Select " [2] LCD CONTRAST".
   [2]
4. Press [▲] or [▼] to darken or lighten the display as required.
   The amount of contrast will change continuously when either [▲] or [▼] is held.
5. After adjusting the contrast, press [C·CE].

6. Turning the "beep" on and off

While " ♪ " is displayed, a "beep" will sound when a key is pressed. To turn the "beep" on and off, press [2nd] [♪]. The "beep" will not sound after " ♪ " goes off. To turn the "beep" back on, repeat the process.

4. DIAGNOSTICS

1. Entering Diag mode

Keep pressing ON + D keys and reset the machine, and the DIAG menu display shown below will appear.

Pressing 0 cancels DIAG and returns to TEL 1 mode.
Pressing 1 starts the LCD check program.
Pressing 2 starts the PCB check (RAM check) program.
Pressing 3 starts the production process check program.
Pressing 5 starts the intermittent aging program.
Pressing 6 starts the low battery check program.
Pressing 7 starts the safety standard system communication program. Pressing 9 turns OFF normally.

```
1 LCD        5 PT AGING
2 PCB        6 LB
3 SET        7 EMI
```

Note: When entering the diag mode, user's data will be destroyed. Be sure to back up the necessary data before entering the diag mode.

2. Diag contents

(1) When LCD is selected:

I. A frame is displayed in one dot width around the outer peripheral of the LCD. (Pressing the Enter key goes to the next screen.)

II. Zigzag pattern 1 is displayed. (Pressing the Enter key goes to the next screen.)

III. Zigzag pattern 2 is displayed. (Pressing the Enter key goes to the next screen.)

IV. The vertical line pattern is displayed. (Pressing the Enter key goes to the next screen.)

V. The horizontal line pattern is displayed. (Pressing the Enter key goes to the LCD density control check screen.)
During displaying of the LCD check in I to V, the density control can be performed with ▲ and ▼ keys. If possible, the most appropriate density is automatically performed for each screen.
In the case of II and IV, the following symbol will light.

BATT 30: 31: EDIT 2nd CAPS * [S] ♪ ↑ ↓

In the case of III and V, the following symbols will light.

30 31

VI. The LCD density control check is performed. (Pressing the Enter key goes to the menu display screen.)
After displaying the horizontal pattern, the LCD density is automatically adjusted.

(2) When PCB is selected:

RAM and ROM will be checked.

RAM CHECK:
Wiring of (1) RAM is checked, and WRITE/READ of (2) A5h and (3) 5Ah are performed for the whole RAM area to perform the RAM bit failure check. After checking, the RAM capacity is displayed. In case of an NG, the check where the NG occurred is also displayed. However, an error may caused by the defective device.

During Checking

```
RAM CHK
```

End of Checking (Normal)

```
RAM 128K                OK
```

End of Checking (NG)

```
RAM 128K 1              NG
```

(3) When SET is selected:

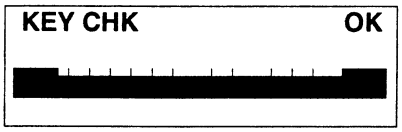
This item is for production process test, and is not required for servicing.

I. LCD is checked. (It goes into key check screen by ENTER key.)

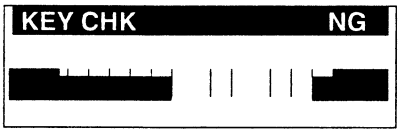
II. Key check screen is appeared.

After depressing all keys except ENTER key, the organizer shows the following screen with ENTER key. Note that it displays the vertical line on the display screen with beep sound for every key pressing. And then it goes into the 4-pin check by next ENTER key.

End of Checking (Normal)



End of Checking (NG)



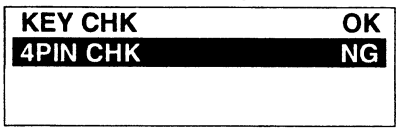
III. 4-pin checking is performed.

Before starting this procedure, the checker for 4-pin checking should be connected to 4-pin connector. At this checking mode, a high signal is detected by outputting a low signal and is also detected in reverse order. After checking, a beep will sound one time at the normal end and it goes to PCB checking by ENTER key.

In case of the abnormal end (NG), the beep is sounding continuously and is stopped to sound by pressing any keys.

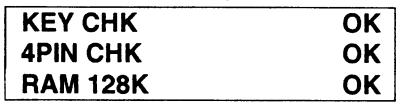
End of Checking (Normal)

End of Checking (NG)

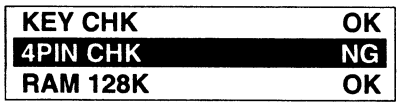


IV. PCB check is performed. (It goes into menu screen by ENTER key.)

End of Checking (Normal)



End of Checking (NG)



(4) When PT AGING is selected:

The following procedures II to IV are repeated without stop. To terminate, press the RESET key. When the battery voltage falls under the CAUTION level, set the communication output port to HIGH. During this procedure, even during displaying, the machine operates at the full power.

I. A5h is written to the whole area of RAM.

II. The zigzag display is shown for 2 sec, and the reversed display is shown for 2 sec.

III. The value written in the RAM is checked. At that time, the reversed zigzag display is kept.

Required time: RAM 32 Kbyte, about 1.1 sec
RAM 64 Kbyte, about 2.1 sec
RAM 128 Kbyte, about 4.2 sec
RAM 256 Kbyte, about 8.4 sec

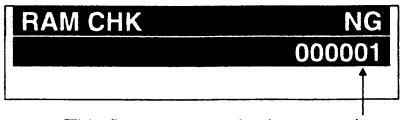
IV. The results of the above RAM checks are displayed as shown below:

In normal procedure, the display is kept for
RAM 32 Kbyte, about 72 sec
RAM 64 Kbyte, about 92 sec
RAM 128 Kbyte, about 123 sec
RAM 256 Kbyte, about 186 sec.

Then the operation goes to the next step (under the normal key waiting state). In case of an error, the aging is stopped at once. The rough ratio of the operation and the key waiting state is 1 : 1.5.

Normal

Error

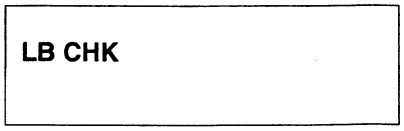


This figure shows the loop number.

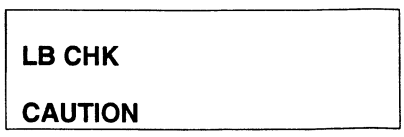
V. The RAM contents are reversed for every 100 times and the operation goes to step II.

(5) When LB is selected:

I. The following display is given and the process of the max. current is performed.



II. When the battery voltage falls below the CAUTION level, the following display is given and BATT symbol is lighted.



III. When the battery voltage falls below the FATAL level, the operation is turned off. Under this state, no key is valid. To terminate, reset the machine.

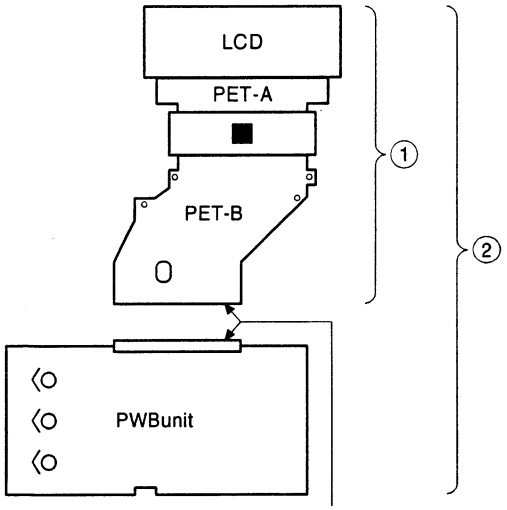
(6) When EMI is selected:

This item is for production process test, and is not required for servicing.

5. Heat seal press work

For the handling method of jigs and notes for work, refer to "Heat Seal Connector (PET) Technical Manual" (Code: 00ZPET-TM///E).

1) Supply parts



Heat seal work position
Pattern pitch : 0.49±0.03mm

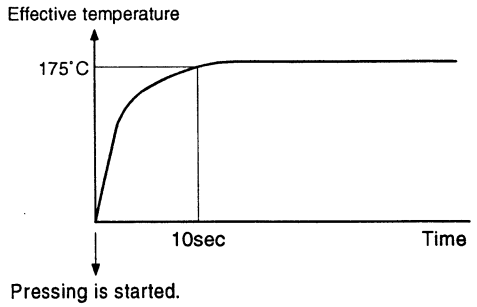
	PARTS NAME	PARTS CODE	MODEL
①	LCD unit (LCD + PET-A + CPU + PET-B)	DUNT-2243PCZZ	ZQ-M401B
		DUNT-2246PCZZ	ZQ-M402R
		DUNT-2250PCZZ	ZQ-M403T
②	LCD unit + Main PWB	DUNTK2242PCZZ	ZQ-M401B
		DUNTK2245PCZZ	ZQ-M402R
		DUNTK2249PCZZ	ZQ-M403T

2) Installation/setting conditions

Set the installation conditions of the heat seal between the PWB and the LCD unit so that the above figures are satisfied.

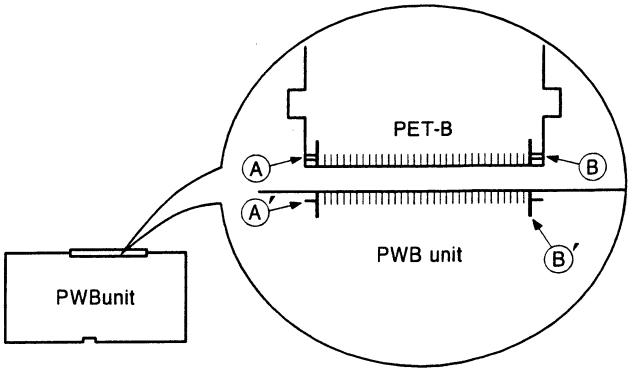
① Pressure: 45 ±2 kg/cm^2

② Effective temperature: 175 ±5°C
Mesured value after 10 sec of pressing of heat seal.

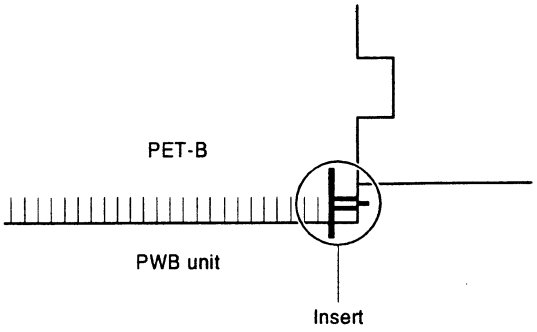


③ Heat seal time: 10 ±1 sec

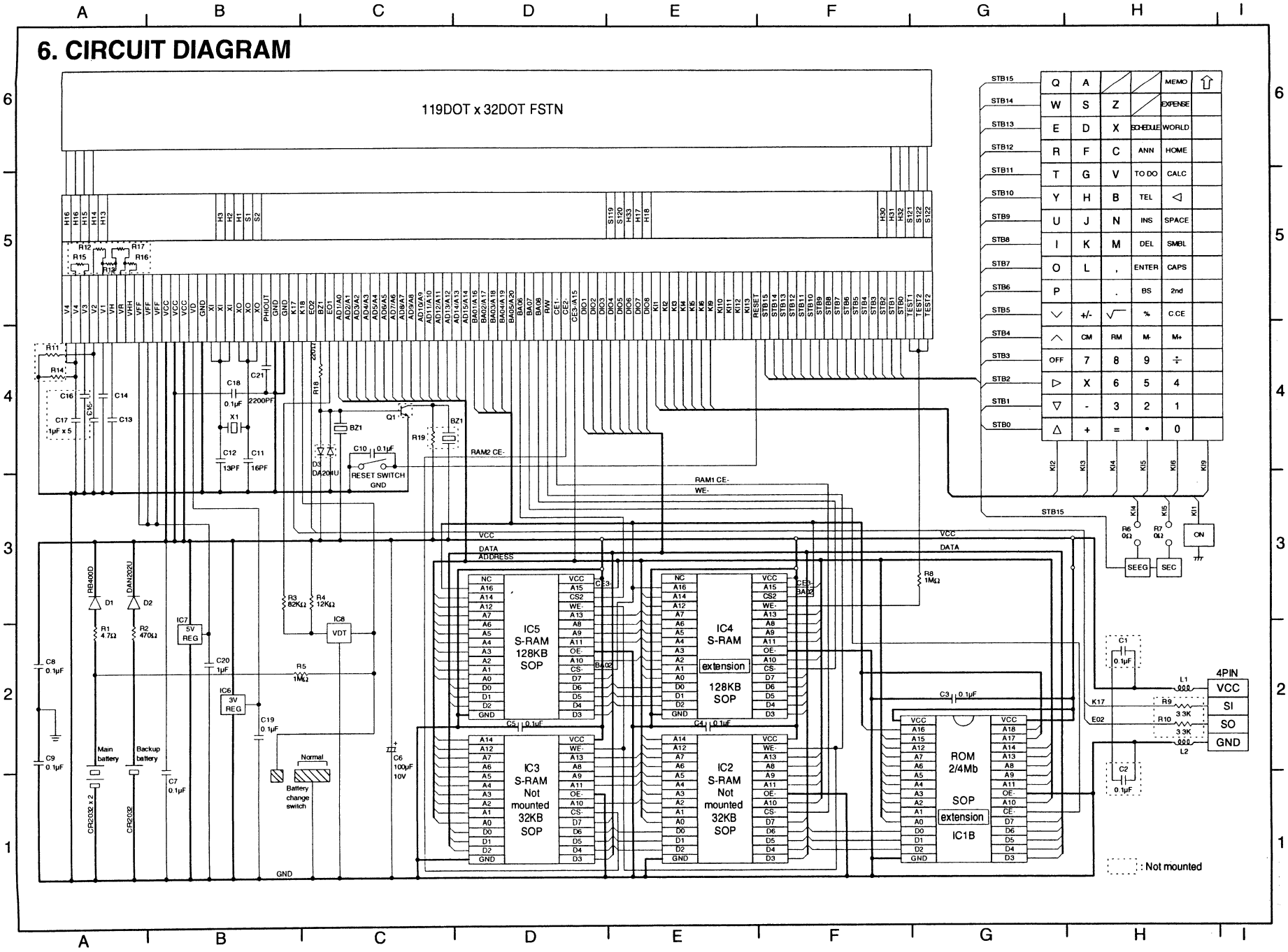
3) Positioning reference when executing heat seal



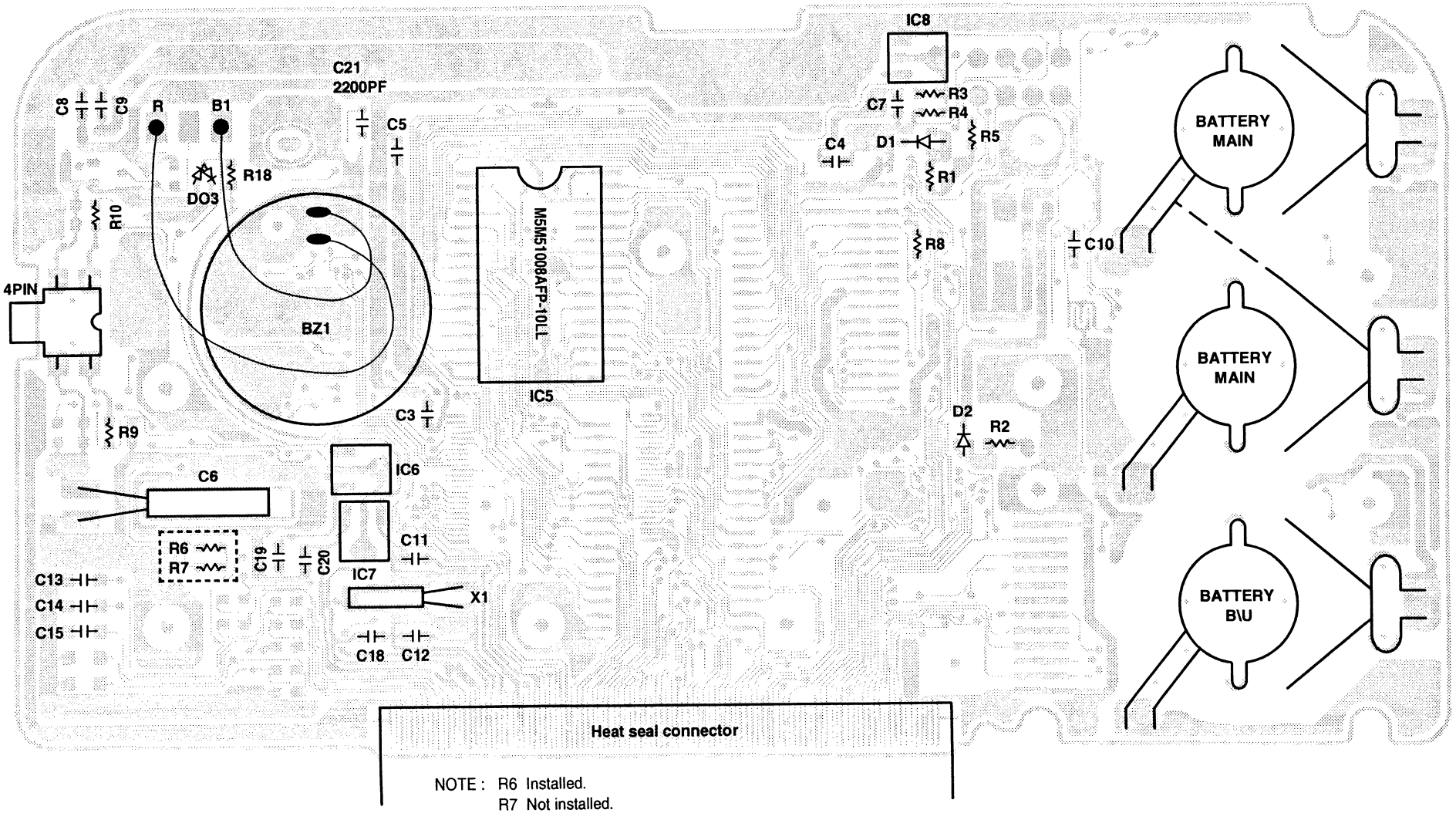
For positioning, fit " ⊢ " shape of PET-B and that of the PWB unit.
((A)-(A)', (B)-(B)')
Pattern pitch : 0.49±0.03mm



6. CIRCUIT DIAGRAM



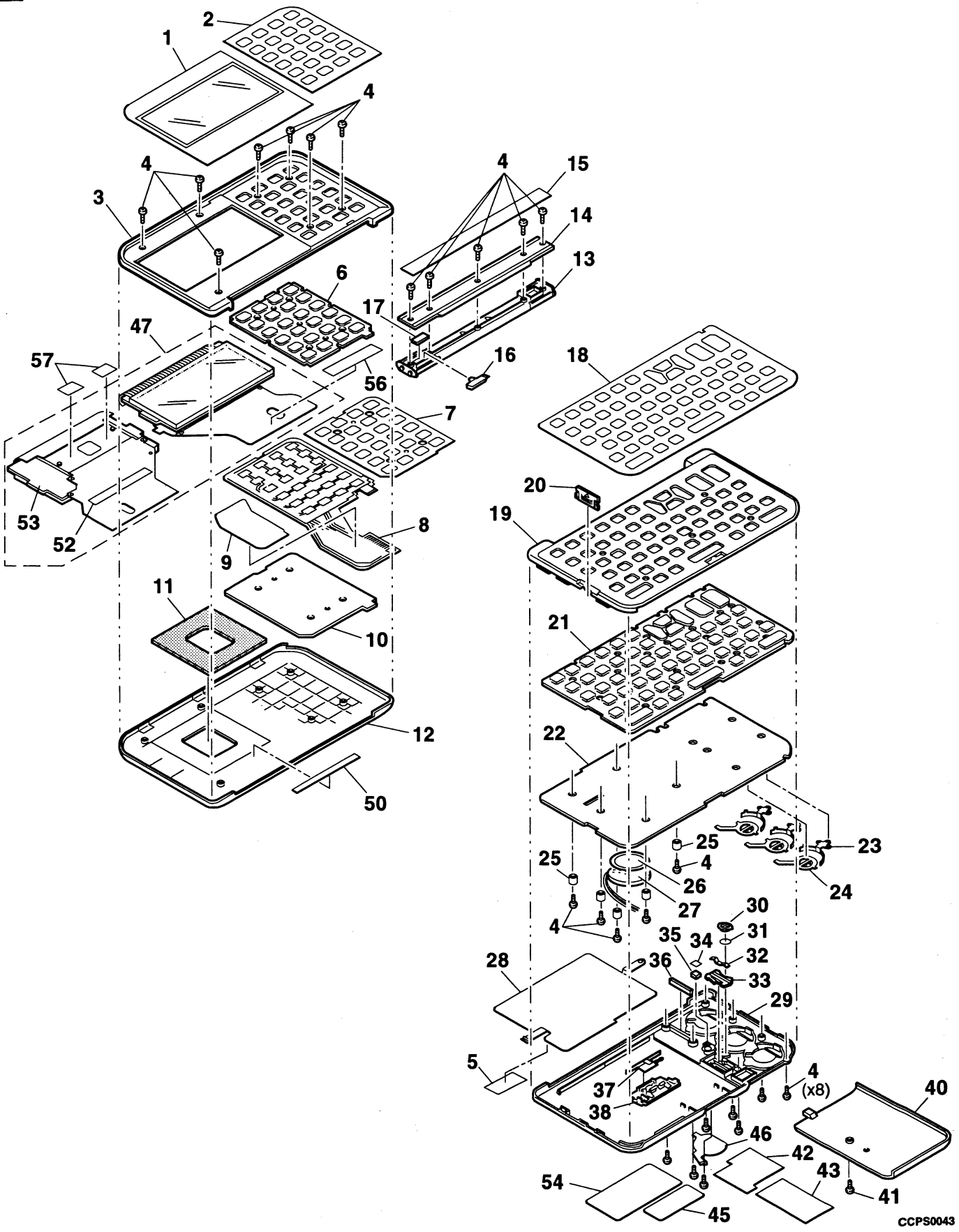
7. PWB PARTS SIGNALS ARRANGEMENT



NOTE : R6 Installed.
R7 Not installed.

PARTS LIST & GUIDE

[1] Exteriors



1 Exteriors

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	ZQ-M401B	ZQ-M402R	ZQ-M403T
1	PSHEZ1044PCZA	AK	N	C	Display deco. film	○		
	PSHEZ1044PCZC	AK	N	C	Display deco. film		○	
	PSHEZ1044PCZB	AK	N	C	Display deco. film			○
2	PSHEZ1045PCZ3	AF	N	C	Mode key deco. film	○		○
	PSHEZ1045PCZ5	AF	N	C	Mode key deco. film		○	
3	GCABB1040PCA1	AG		D	Display panel	○	○	○
4	LX-BZ1014PCZZ	AA		C	Screw (M1.7)	○	○	○
5	PTPEH1055PCZZ	AB		D	Shield plate tape	○	○	○
6	PGUMM1025PCZZ	AF		C	Upper key rubber	○	○	○
7	PSPAP1041PCZZ	AC		C	Key spacer	○	○	○
8	QPWBH1072PCZZ	AP		C	Key sheet	○	○	○
9	PTPEH1052PCZZ	AC		D	Key sheet tape	○	○	○
10	LFiX-1008PCZZ	AG		C	Key sheet holder	○	○	○
11	PCUSS1010PCZZ	AC		C	LCD cushion	○	○	○
12	GCABC1041PCA1	AM		D	Top cover	○	○	○
13	MHNG-1002PCZZ	AD		C	Upper hinge	○	○	○
14	MHNG-1001PCZZ	AD		C	Lower hinge	○	○	○
15	PSHEZ1048PCZZ	AB		C	Screw hide sheet	○	○	○
16	LSTPP1005PCZZ	AC		C	Hinge stopper	○	○	○
17	PGUMS1027PCZZ	AB		C	Hinge hold rubber	○	○	○
18	PSHEZ1046PCZ4	AM	N	C	Key deco. film	○		
	PSHEZ1046PCZ6	AM	N	C	Key deco. film		○	
	PSHEZ1046PCZ5	AM	N	C	Key deco. film			○
19	GCABD1042PCZZ	AH		D	Keyboard panel	○	○	○
20	GFTAA1010PCZ2	AC		D	Connector cover	○	○	○
21	PGUMM1026PCZ2	AQ		C	Lower key rubber	○	○	○
22	DUNTK2242PCZZ	BU	N	E	PWB unit with LCD unit (Include No.23,24,26,27,47,56)	○		
	DUNTK2245PCZZ	BU	N	E	PWB unit with LCD unit (Include No.23,24,26,27,47,56)		○	
	DUNTK2249PCZZ	BU	N	E	PWB unit with LCD unit (Include No.23,24,26,27,47,56)			○
23	QTANB1030PCZZ	AC		C	Battery terminal ⊕	○	○	○
24	QTANB1019PCZZ	AE		C	Battery terminal ⊖	○	○	○
25	LBÖS-1002PCZZ	AB		C	PWB hold boss	○	○	○
26	PSHEZ1055PCZZ	AD		C	Buzzer spacer	○	○	○
27	RALMB1030CCZZ	AD		B	Buzzer (EFB-S49C02P)	○	○	○
28	PSLDC1018PCZZ	AG		C	Shield plate	○	○	○
29	GCABA1043PCZZ	AM		D	Bottom cover	○	○	○
30	PGUMM1693CCZZ	AA		C	Reset rubber	○	○	○
31	PSPAV1025PCZZ	AA		C	Reset switch cover	○	○	○
32	QCNTM1056CC02	AB		C	Contact	○	○	○
33	JKNBZ1022PCZ2	AC		C	Battery replace switch	○	○	○
34	PSHEZ1049PCZZ	AA		C	Nut hold tape	○	○	○
35	LX-NZ1003PCZZ	AC		C	Nut (M1.7)	○	○	○
36	PGUMS1028PCZZ	AB		C	Key sheet press rubber	○	○	○
37	MSPRP1024PCZZ	AC		C	Cover lock spring	○	○	○
38	JKNBZ1039PCA1	AD		C	Cover lock	○	○	○
40	GFTAB1025PCA1	AF		D	Battery cover	○	○	○
41	LX-BZ1023PCZZ	AB		C	Screw (M1.7)	○	○	○
42	TCAUA1008PCZZ	AC	N	D	Main battery caution label	○	○	○
43	TCAUA1009PCZZ	AC	N	D	B/U battery caution label	○	○	○
45	TLABZ1202PCZZ	AA		D	Battery replacement date label	○	○	○
46	LFiX-1009PCZZ	AC		C	Back up battery holder	○	○	○
47	DUNT-2243PCZZ	BL	N	E	LCD unit (Include No.52,53,101,102)	○		
	DUNT-2246PCZZ	BL	N	E	LCD unit (Include No.52,53,101,102)		○	
	DUNT-2250PCZZ	BL	N	E	LCD unit (Include No.52,53,101,102)			○
50	PCUSS1012PCZZ	AB		C	PET cushion	○	○	○
52	PTPEH1067PCZZ	AA		D	PET tape	○	○	○
53	PSHEZ1047PCZZ	AC		C	LCD holder	○	○	○
54	TLABM1264PCZZ	AC	N	D	Model label	○		
	TLABM1266PCZZ	AC	N	D	Model label		○	
	TLABM1265PCZZ	AC	N	D	Model label			○
56	PZETL1038PCZZ	AB		C	PET reinforcing tape	○	○	○
57	PSHEZ1047PCZ9	AB		C	LCD holder(B/U)	○	○	○
101	PTPEH1053PCZZ	AD		D	B/U tape A (TCP/PWB)	○	○	○
102	PTPEH1054PCZZ	AB		D	B/U tape B (LCD/TCP)	○	○	○

2 Packing material & Accessories

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	ZQ-M401B	ZQ-M402R	ZQ-M403T
1	SPAKC1612PCZZ	AF	N	D	Packing case	○		
	SPAKC1618PCZZ	AF	N	D	Packing case		○	
	SPAKC1615PCZZ	AF	N	D	Packing case			○
2	SPAKA1467PCZZ	AC		D	Packing cushion for SET	○	○	○
3	SPAK-546ECCZZ	AB		D	Vinyl bag (125×230)	○	○	○
4	TGANE1003CSZZ	AD		D	Warranty card	○		
5	TiNSZ1211PCZZ	AQ	N	D	Instruction book	○		
	TiNSZ1213PCZZ	AQ	N	D	Instruction book		○	

2 Packing material & Accessories

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	ZQ-M401B	ZQ-M402R	ZQ-M403T
5	TINSZ1212PCZZ	AQ	N	D	Instruction book			○
6	TCADZ1132PCZZ	AD	N	D	Operation card B	○		
	TCADZ1133PCZZ	AD	N	D	Operation card R		○	
	TCADZ1134PCZZ	AD	N	D	Operation card T			○

3 Main PWB unit

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	ZQ-M401B	ZQ-M402R	ZQ-M403T
1	PSHEZ1055PCZZ	AD		C	Buzzer spacer	○	○	○
2	QCNCM1416CC0D	AE		C	Connector (4pin)	○	○	○
3	QTANB1019PCZZ	AE		C	Battery terminal ⊖	○	○	○
4	QTANB1030PCZZ	AC		C	Battery terminal ⊕	○	○	○
5	RALMB1030CCZZ	AD		B	Buzzer (EFB-S49C02P) [BZ1]	○	○	○
6	RC-EZ107AEC1A	AB		C	Capacitor (10WV 100μF) [C6]	○	○	○
7	RCRSP1009PCZZ	AD		B	Crystal (32.768KHz) [X1]	○	○	○
8	VCCCTV1HH130J	AA		C	Capacitor (50WV 13PF) [C12]	○	○	○
9	VCCCTV1HH160J	AA		C	Capacitor (50WV 16PF) [C11]	○	○	○
10	VCCCTV1HH222J	AB		C	Capacitor (50WV 2200PF) [C21]	○	○	○
11	VCKYTQ1EF105Z	AB		C	Capacitor (25WV 1.0μF) [C13~15]	○	○	○
12	VCKYTV1CF105Z	AB		C	Capacitor (16WV 1.0μF) [C20]	○	○	○
13	VCKYTV1EF104Z	AA		C	Capacitor (25WV 0.1μF) [C3~5,7~10,18,19]	○	○	○
14	VHDDAN202U/-1	AB		B	Diode (DAN202U) [D2]	○	○	○
15	VHDDA204U//-1	AB		B	Diode (DA204U) [D3]	○	○	○
16	VHDRB400D//-1	AC		B	Diode (RB400D) [D1]	○	○	○
17	VHiRH5RL30AA1	AD		B	IC (RH5RL30AA1) [IC6]	○	○	○
18	VHiRH5RL50AA1	AD		B	IC (RH5RL50AA1) [IC7]	○	○	○
19	VHiRH5VL40AA1	AD		B	IC (RH5VL40AA1) [IC8]	○	○	○
20	VHi51008AFP10	BF		B	IC (51008AFP10) [IC5]	○	○	○
21	VRS-TS2AD000J	AA		C	Resistor (1/10W 0Ω ±5%) [R6]	○	○	○
22	VRS-TS2AD105J	AA		C	Resistor (1/10W 1MΩ ±5%) [R5,8]	○	○	○
23	VRS-TS2AD123J	AA		C	Resistor (1/10W 12KΩ ±5%) [R4]	○	○	○
24	VRS-TS2AD221J	AA		C	Resistor (1/10W 220KΩ ±5%) [R18]	○	○	○
25	VRS-TS2AD332J	AA		C	Resistor (1/10W 3.3KΩ ±5%) [R9,10]	○	○	○
26	VRS-TS2AD4R7J	AA		C	Resistor (1/10W 4.7Ω ±5%) [R1]	○	○	○
27	VRS-TS2AD471J	AA		C	Resistor (1/10W 470Ω ±5%) [R2]	○	○	○
28	VRS-TS2AD823J	AA		C	Resistor (1/10W 82KΩ ±5%) [R3]	○	○	○
	(Unit)							
901	DUNTK2242PCZZ	BU	N	E	PWB unit with LCD unit	○		
	DUNTK2245PCZZ	BU	N	E	PWB unit with LCD unit		○	
	DUNTK2249PCZZ	BU	N	E	PWB unit with LCD unit			○

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